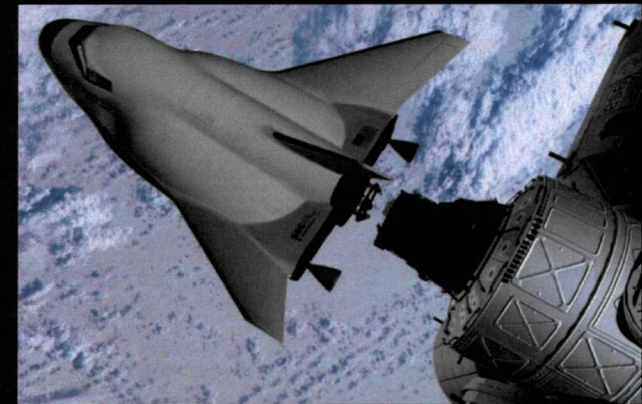
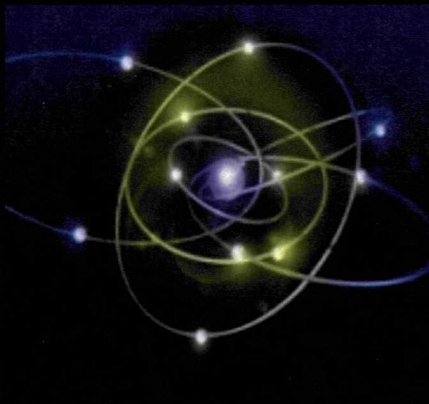




# Opportunities for Partnering in Aerospace: A NASA Perspective



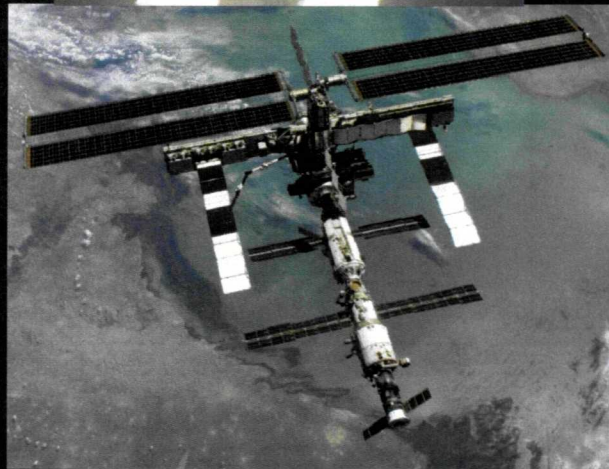
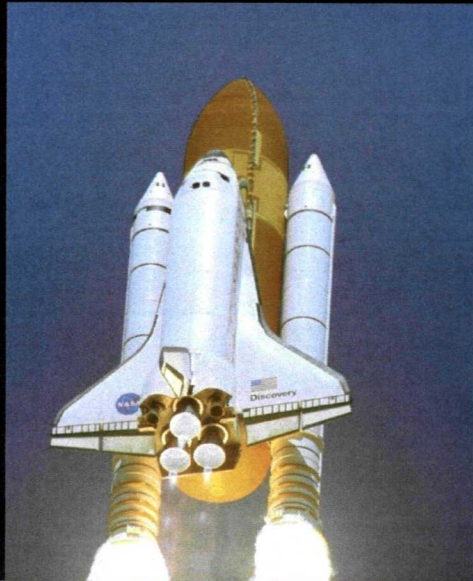
**Presented by: Janet Petro, Deputy Director  
NASA Kennedy Space Center**

**July 2010**

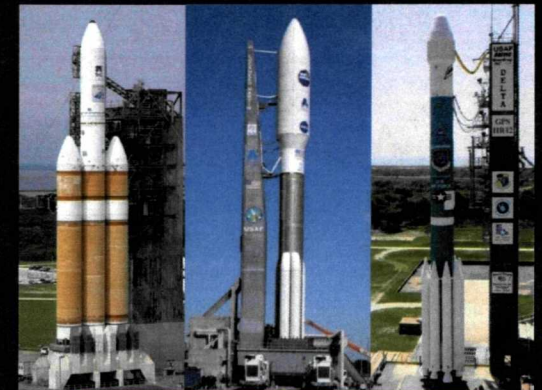




# Kennedy Space Center – A National Spaceport

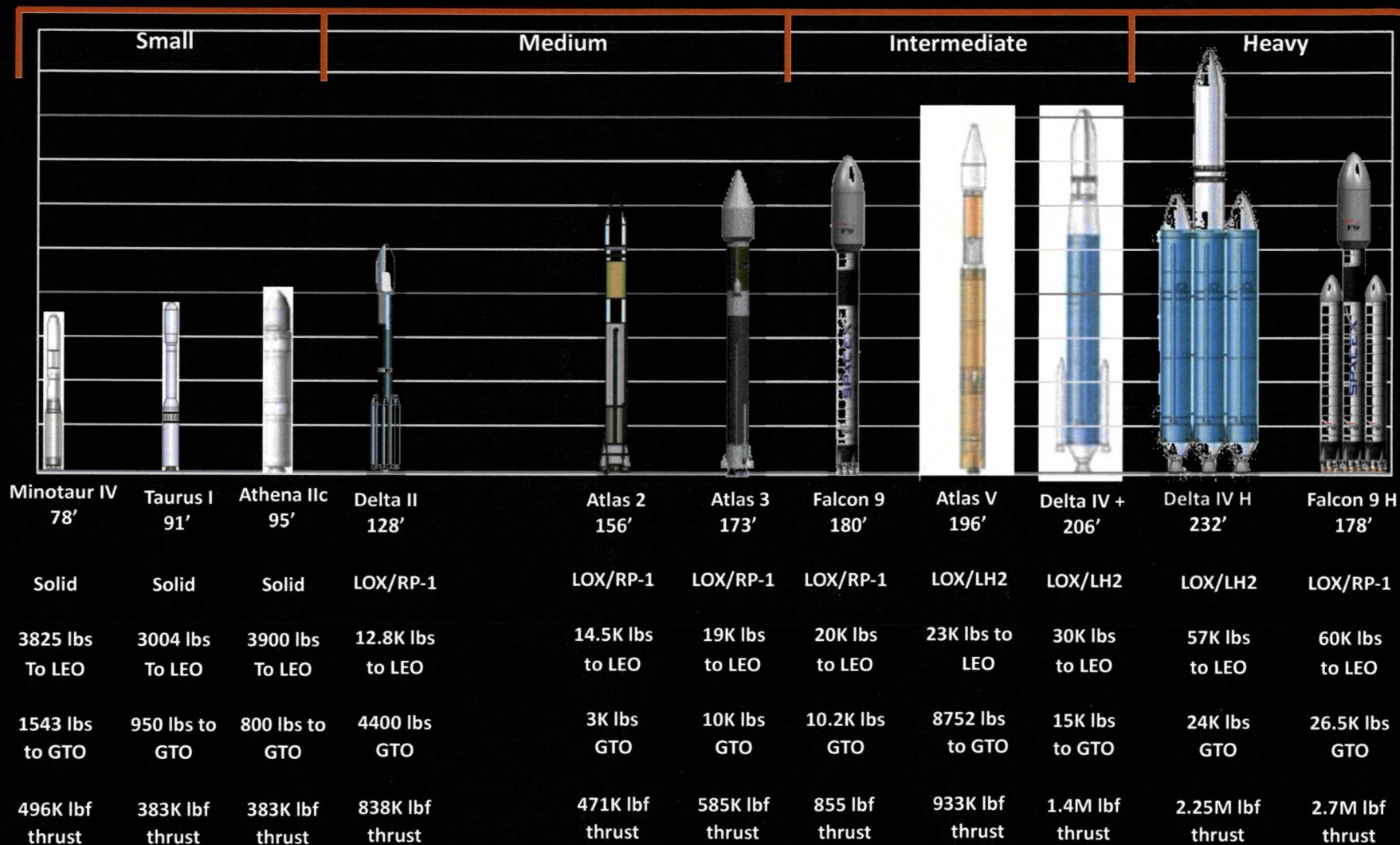


- Major Programs
  - Space Shuttle
  - International Space Station
  - Launch Services
  - Constellation
- Multiple Commercial Ventures
  - Exploration Park
  - COTS
  - Orion Production
- Employing 15,000
  - 2,000 NASA Civil Servants
  - 13,000 Contractors/Tenants
- Economic Impact
  - \$1.67 Billion
- Covering 140,000 Acres
  - Over 900 Facilities
  - National Wildlife Refuge





# Florida's Spaceport Launch Capability







\*SOURCE: 2000 CENSUS





# **KSC – More than just rockets**

## **KSC Mission**

- **KSC safely manages, develops, integrates, and sustains space systems through partnerships that enable innovative, diverse access to space and inspires the Nation's future**

## **KSC Core Competencies**

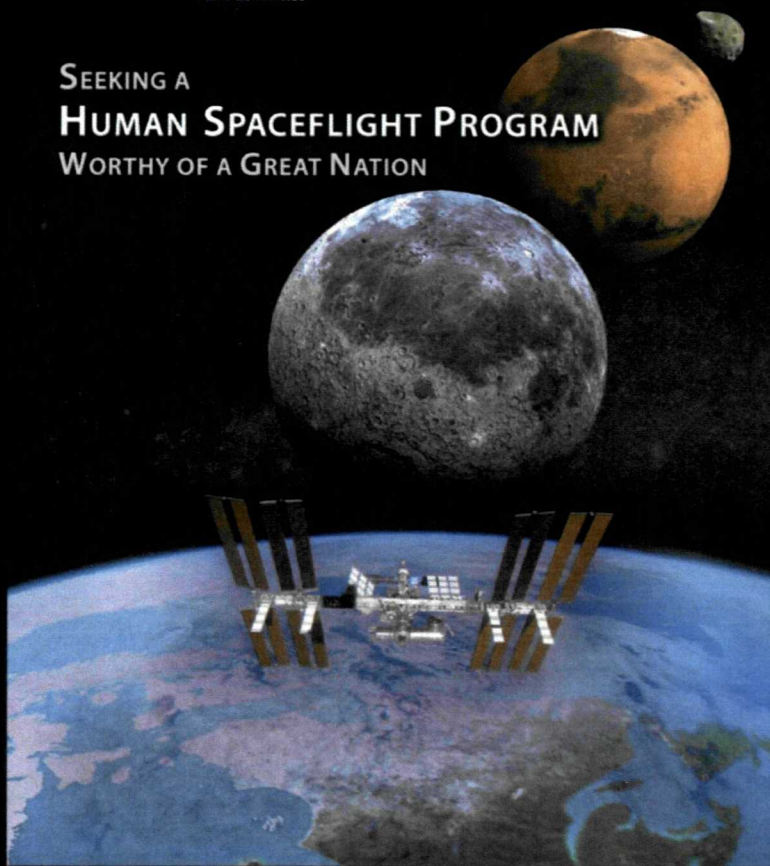
- **Acquisition and management of launch services and commercial crew development**
- **Launch vehicle and spacecraft processing, launching, landing and recovery, operations and sustaining**
- **Payload and flight science experiment processing, integration and testing**
- **Designing, developing, operating, and sustaining flight and ground systems, and supporting infrastructure**
- **Development, test and demonstration of advanced flight systems and transformational technologies**
- **Developing technology to advance exploration and space systems**



# President's Space Policy

Review of U.S.  
**HUMAN SPACEFLIGHT**  
Plans Committee

SEEKING A  
**HUMAN SPACEFLIGHT PROGRAM**  
WORTHY OF A GREAT NATION



**After a review of U.S. human spaceflight, the President has proposed that NASA:**

- **Perform R&D that enables exploration beyond earth orbit**
- **Use ISS as a national lab, and operate until at least 2020**
- **Rely on commercial services to transport ISS crew and cargo**





# Preparing for the Future

**GOAL 1: Provide  
Government & commercial  
access to space**

**Government only, end stage**

➡ **Government & Commercial,  
full lifecycle**

**GOAL 2: Develop, operate  
and sustain a robust launch  
complex for all providers**

**Program Specific**

➡ **Multi-User Capability**

**GOAL 3: Conduct research  
and technology development**

**Narrowly specified areas**

➡ **Leading key research &  
technology areas**

**GOAL 4: Provide a robust  
institution**

**Program centered**

➡ **Multi-program & commercial**





# Kennedy Space Center Launch Complex

**Reliable Access to Unique  
Launch Property and  
Associated Services**







# Access to Facilities



Orbital Processing Facility



Thermal Protection System Facility



Operations & Checkout Facility



Space Station Processing Facility

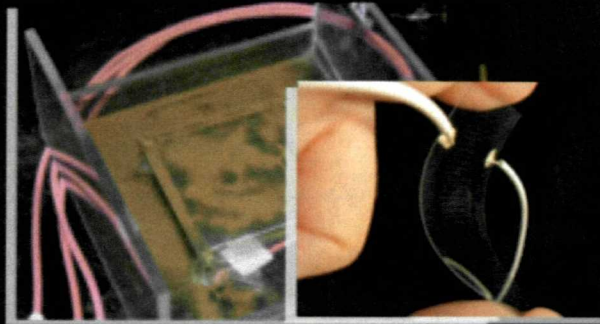


Payload Maintenance Facility





# KSC Technology Capabilities



**Dust Mitigation:**  
Electrodynamic dust  
shield technology for self-  
cleaning surfaces



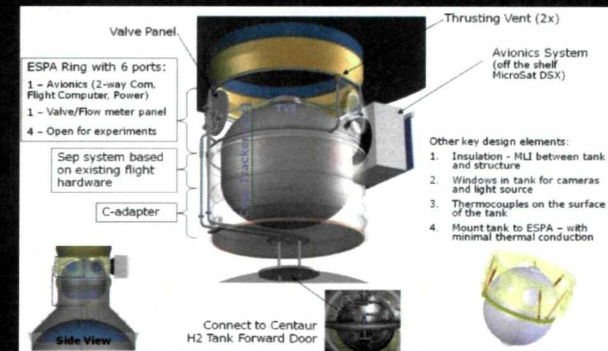
**Early Wire Failure Detection  
& Repair**



**Human Robotic  
Systems (HRS)  
Lightweight Chariot  
Bulldozer Blade**



**Smart, self-healing  
coatings**



**CRYOTE  
Propellant  
Payload**





# Opportunities – Commercial Crew and Cargo

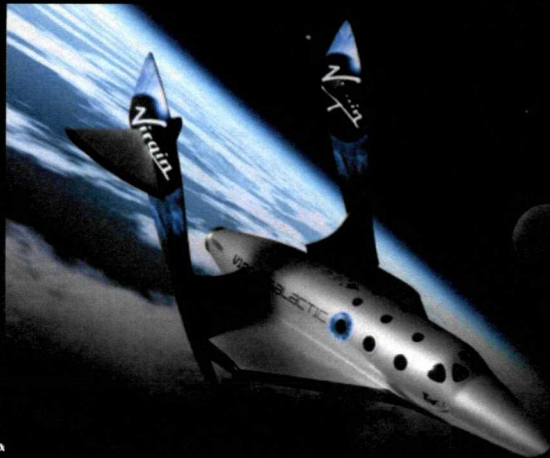


**New and growing commercial space activities**

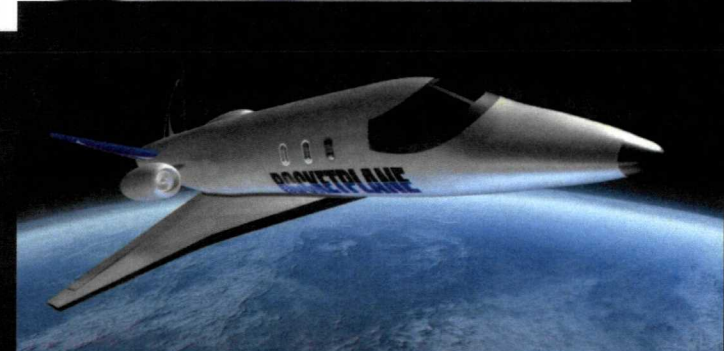




# Opportunities – Entrepreneurial Space



Concept of SpaceShipTwo © Virgin Galactic



## New emerging entrepreneurial industries at KSC

- Reusable launch vehicles
- Suborbital spaceflight for science, STEM, tourism





# Opportunities - Exploration Park

- **An innovative development partnership with State of Florida**
- **Offers a commercial environment with close connection to KSC assets but outside KSC Security Perimeter**
- **Payload processing**
- **Life Science Research**
- **Modeling & Simulation**
- **Clean Energy**
- **Research**
- **Space Technology**

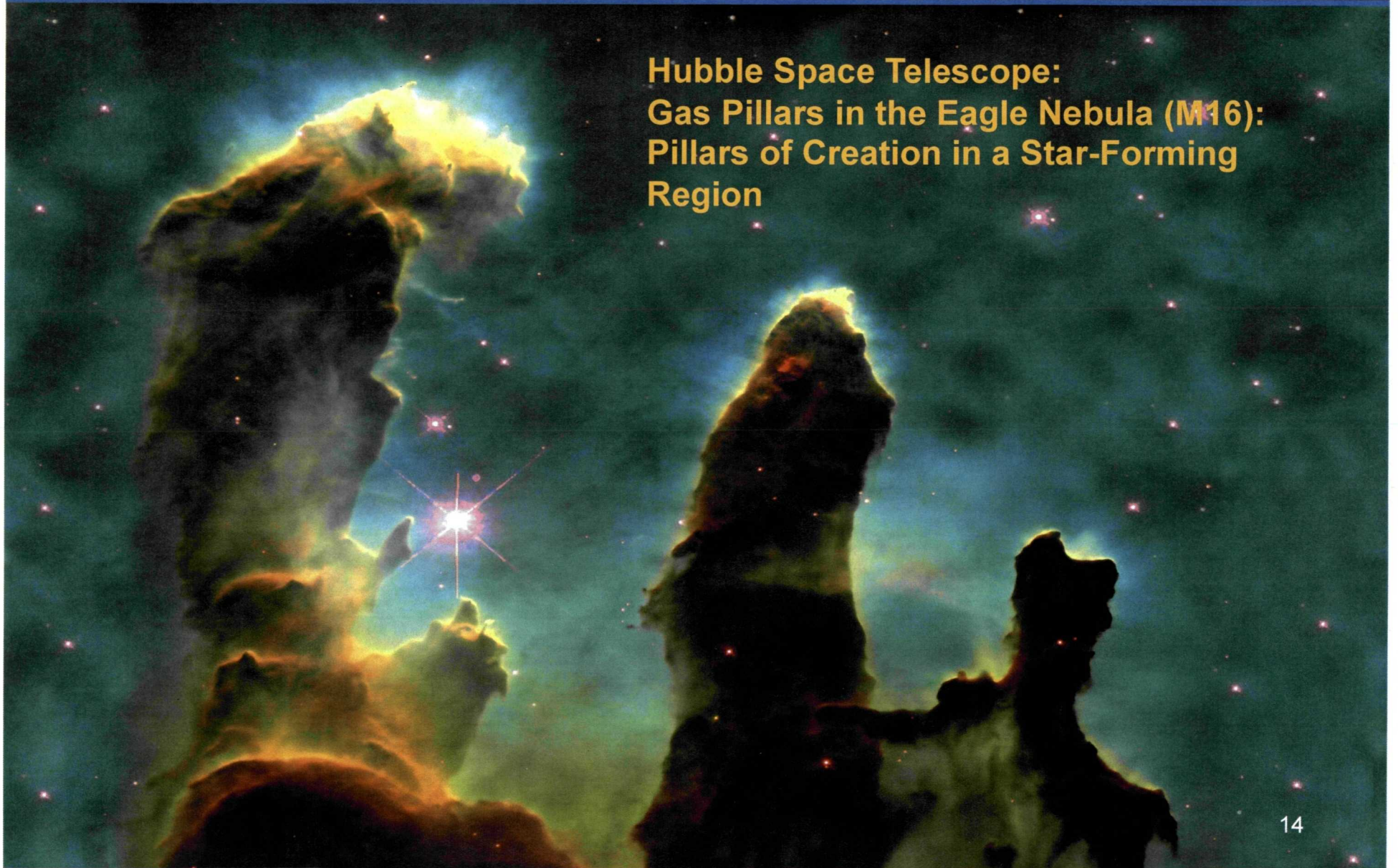






# NASA and UK - Partners in Space

Hubble Space Telescope:  
Gas Pillars in the Eagle Nebula (M16):  
Pillars of Creation in a Star-Forming  
Region







# KSC Development Office

**KSC Development Office is the  
front door for business and  
partnerships**

**<http://kscpartnerships.ksc.nasa.gov>**

**Joyce Riquelme**

**Center Planning & Development Office**

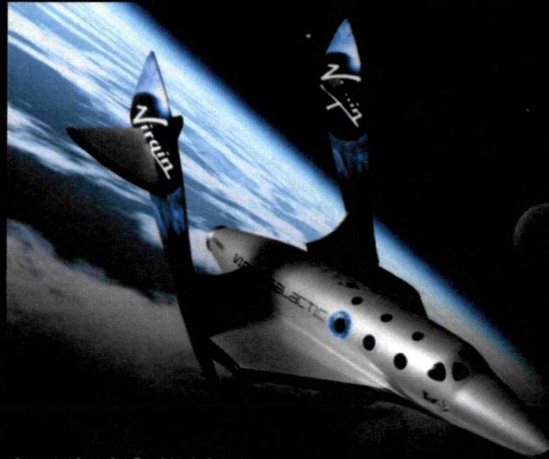
**[Joyce.M.Riquelme@nasa.gov](mailto:Joyce.M.Riquelme@nasa.gov)**



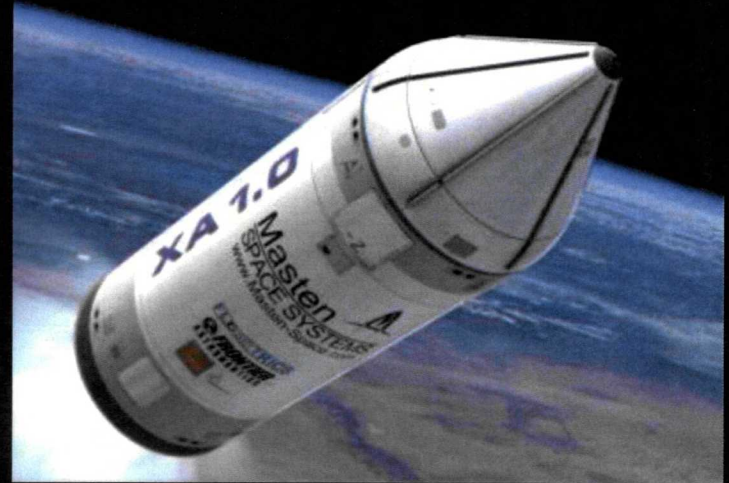




# Seeking opportunities to Partner with you



Concept of SpaceShipTwo © Virgin Galactic



**Commercial and international companies are welcome at the  
Kennedy Space Center**



